

SEQUENCE LISTING

<110> Coyle, Anthony J.
Fraser, Christopher C.
Manning, Stephen

<120> B7-H2 Molecules, Novel Members of the B7
Family and Uses Thereof

<130> 35800/236924

<140> 09/910,174

<141> 2001-07-20

<150> US 09/620,461

<151> 2000-07-20

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Met Ile Phe Leu Leu Leu Met Leu Ser Leu Glu
1 5 10

ttg cag ctt cac cag ata gca gct tta ttc aca gtg aca gtc cct aag 158
Leu Gln Leu His Gln Ile Ala Ala Leu Phe Thr Val Thr Val Pro Lys

15 20 25

gaa ctg tac ata ata gag cat ggc agc aat gtg acc ctg gaa tgc aac 206
Glu Leu Tyr Ile Ile Glu His Gly Ser Asn Val Thr Leu Glu Cys Asn

30 35 40

ttt gac act gga agt cat gtg aac ctt gga gca ata aca gcc agt ttg 254
Phe Asp Thr Gly Ser His Val Asn Leu Gly Ala Ile Thr Ala Ser Leu

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gtc caa gtg agg gac gaa gga cag tac caa tgc ata atc atc tat ggg Val Gln Val Arg Asp Glu Gly Gln Tyr Gln Cys Ile Ile Ile Tyr Gly 95 100 105			398
gtc gcc tgg gac tac aag tac ctg act ctg aaa gtc aaa gct tcc tac Val Ala Trp Asp Tyr Lys Tyr Leu Thr Leu Lys Val Lys Ala Ser Tyr 110 115 120			446
agg aaa ata aac act cac atc cta aag gtt cca gaa aca gat gag gta Arg Lys Ile Asn Thr His Ile Leu Lys Val Pro Glu Thr Asp Glu Val 125 130 135			494
gag ctc acc tgc cag gct aca ggt tat cct ctg gca gaa gta tcc tgg Glu Leu Thr Cys Gln Ala Thr Gly Tyr Pro Leu Ala Glu Val Ser Trp 140 145 150 155			542
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ggc ctc tac cag gtc acc agt gtt ctg cgc cta aag cca ccc cct ggc Gly Leu Tyr Gln Val Thr Ser Val Leu Arg Leu Lys Pro Pro Pro Gly 175 180 185			638
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ttc ata gcc aca gtg ata gcc cta aga aaa caa ctc tgt caa aag ctg Phe Ile Ala Thr Val Ile Ala Leu Arg Lys Gln Leu Cys Gln Lys Leu 240 245 250			830
tat tct tca aaa gac aca aca aaa aga cct gtc acc aca aca aag agg Tyr Ser Ser Lys Asp Thr Thr Lys Arg Pro Val Thr Thr Thr Lys Arg 255 260 265			878
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<213> Homo sapiens

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Glu His Gly Ser Asn Val Thr Leu Glu Cys Asn Phe Asp Thr Gly Ser
35 40 45
His Val Asn Leu Gly Ala Ile Thr Ala Ser Leu Gln Lys Val Glu Asn
50 55 60
Asp Thr Ser Pro His Arg Glu Arg Ala Thr Leu Leu Glu Glu Gln Leu
65 70 75 80
Pro Leu Gly Lys Ala Ser Phe His Ile Pro Gln Val Gln Val Arg Asp
85 90 95
Glu Gly Gln Tyr Gln Cys Ile Ile Ile Tyr Gly Val Ala Trp Asp Tyr
100 105 110
Lys Tyr Leu Thr Leu Lys Val Lys Ala Ser Tyr Arg Lys Ile Asn Thr
115 120 125
His Ile Leu Lys Val Pro Glu Thr Asp Glu Val Glu Leu Thr Cys Gln
130 135 140
Ala Thr Gly Tyr Pro Leu Ala Glu Val Ser Trp Pro Asn Val Ser Val
145 150 155 160
Pro Ala Asn Thr Ser His Ser Arg Thr Pro Glu Gly Leu Tyr Gln Val
165 170 175
Thr Ser Val Leu Arg Leu Lys Pro Pro Pro Gly Arg Asn Phe Ser Cys
180 185 190
Val Phe Trp Asn Thr His Val Arg Glu Leu Thr Leu Ala Ser Ile Asp
195 200 205
Leu Gln Ser Gln Met Glu Pro Arg Thr His Pro Thr Trp Leu Leu His

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210		215		220
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Thr Thr Lys Arg Pro Val Thr Thr Thr Lys Arg Glu Val Asn Ser Ala				
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 Met Ile Phe Leu Leu Leu Met Leu Ser Leu Glu Leu Gln Leu
 1 5 10

cac cag ata gca gct tta ttc aca gtg aca gtc cct aag gaa ctg tac 159
 His Gln Ile Ala Ala Leu Phe Thr Val Thr Val Pro Lys Glu Leu Tyr
 15 20 25 30

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 Ile Ile Glu His Gly Ser Asn Val Thr Leu Glu Cys Asn Phe Asp Thr
 35 40 45

gga agt cat gtg aac ctt gga gca ata aca gcc agt ttg caa aag gtg 255
 Gly Ser His Val Asn Leu Gly Ala Ile Thr Ala Ser Leu Gln Lys Val
 50 55 60

gaa aat gat aca tcc cca cac cgt gaa aga gcc act ttg ctg gag gag 303
 Glu Asn Asp Thr Ser Pro His Arg Glu Arg Ala Thr Leu Leu Glu Glu
 65 70 75

cag ctg ccc cta ggg aag gcc tcg ttc cac ata cct caa gtc caa gtg 351
 Gln Leu Pro Leu Gly Lys Ala Ser Phe His Ile Pro Gln Val Gln Val
 80 85 90

agg gac gaa gga cag tac caa tgc ata atc atc tat ggg gtc gcc tgg 399
 Arg Asp Glu Gly Gln Tyr Gln Cys Ile Ile Ile Tyr Gly Val Ala Trp
 95 100 105 110

gac tac aag tac ctg act ctg aaa gtc aaa ggt cag atg gaa ccc agg 447
 Asp Tyr Lys Tyr Leu Thr Leu Lys Val Lys Gly Gln Met Glu Pro Arg
 115 120 125

acc cat cca act tgg ctg ctt cac att ttc atc ccc tcc tgc atc att 495
 Thr His Pro Thr Trp Leu Leu His Ile Phe Ile Pro Ser Cys Ile Ile
 130 135 140

gct ttc att ttc ata gcc aca gtg ata gcc cta aga aaa caa ctc tgt 543
 Ala Phe Ile Phe Ile Ala Thr Val Ile Ala Leu Arg Lys Gln Leu Cys
 145 150 155

caa aag ctg tat tct tca aaa gac aca aca aaa aga cct gtc acc aca 591
 Gln Lys Leu Tyr Ser Ser Lys Asp Thr Thr Lys Arg Pro Val Thr Thr
 160 165 170

aca aag agg gaa gtg aac agt gct atc tgaacctgtg gtcttgggag 638
 Thr Lys Arg Glu Val Asn Ser Ala Ile
 175 180

ccaggggtgac ctgatatgac atctaaagaa gcttctggac tctgaacaag aattcgggtgg 698
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 gtctagagaa aaaacct 1975

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 Glu His Gly Ser Asn Val Thr Leu Glu Cys Asn Phe Asp Thr Gly Ser
 35 40 45
 His Val Asn Leu Gly Ala Ile Thr Ala Ser Leu Gln Lys Val Glu Asn
 50 55 60
 Asp Thr Ser Pro His Arg Glu Arg Ala Thr Leu Leu Glu Glu Gln Leu
 65 70 75 80

Pro Leu Gly Lys Ala Ser Phe His Ile Pro Gln Val Gln Val Arg Asp
 85 90 95
 Glu Gly Gln Tyr Gln Cys Ile Ile Ile Tyr Gly Val Ala Trp Asp Tyr
 100 105 110
 Lys Tyr Leu Thr Leu Lys Val Lys Gly Gln Met Glu Pro Arg Thr His
 115 120 125
 Pro Thr Trp Leu Leu His Ile Phe Ile Pro Ser Cys Ile Ile Ala Phe
 130 135 140
 Ile Phe Ile Ala Thr Val Ile Ala Leu Arg Lys Gln Leu Cys Gln Lys
 145 150 155 160
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 165 170 175
 Arg Glu Val Asn Ser Ala Ile
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 <213> Homo sapiens

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 35 40 45
 Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
 50 55 60
 Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
 65 70 75 80
 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
 85 90 95
 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
 100 105 110
 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
 115 120 125
 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr
 130 135 140
 Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile
 145 150 155 160
 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu
 165 170 175
 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp
 180 185 190
 Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met
 195 200 205
 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg
 210 215 220
 Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro
 225 230 235 240
 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
 245 250 255
 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
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275

280

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 Pro Cys Gln Phe Ala Asn Ser Gln Asn Gln Ser Leu Ser Glu Leu Val
 35 40 45
 Val Phe Trp Gln Asp Gln Glu Asn Leu Val Leu Asn Glu Val Tyr Leu
 50 55 60
 Gly Lys Glu Lys Phe Asp Ser Val His Ser Lys Tyr Met Gly Arg Thr
 65 70 75 80
 Ser Phe Asp Ser Asp Ser Trp Thr Leu Arg Leu His Asn Leu Gln Ile
 85 90 95
 Lys Asp Lys Gly Leu Tyr Gln Cys Ile Ile His His Lys Lys Pro Thr
 100 105 110
 Gly Met Ile Arg Ile His Gln Met Asn Ser Glu Leu Ser Val Leu Ala
 115 120 125
 Asn Phe Ser Gln Pro Glu Ile Val Pro Ile Ser Asn Ile Thr Glu Asn
 130 135 140
 Val Tyr Ile Asn Leu Thr Cys Ser Ser Ile His Gly Tyr Pro Glu Pro
 145 150 155 160
 Lys Lys Met Ser Val Leu Leu Arg Thr Lys Asn Ser Thr Ile Glu Tyr
 165 170 175
 Asp Gly Ile Met Gln Lys Ser-Gln Asp Asn Val Thr Glu Leu Tyr Asp
 180 185 190
 Val Ser Ile Ser Leu Ser Val Ser Phe Pro Asp Val Thr Ser Asn Met
 195 200 205
 Thr Ile Phe Cys Ile Leu Glu Thr Asp Lys Thr Arg Leu Leu Ser Ser
 210 215 220
 Pro Phe Ser Ile Glu Leu Glu Asp Pro Gln Pro Pro Pro Asp His Ile
 225 230 235 240
 Pro Trp Ile Thr Ala Val Leu Pro Thr Val Ile Ile Cys Val Met Val
 245 250 255
 Phe Pro Cys Leu Ile Leu Trp Lys Trp Lys Lys Lys Lys Arg Pro Arg
 260 265 270
 Asn Ser Tyr Lys Cys Gly Thr Asn Thr Met Glu Arg Glu Ser Glu
 275 280 285
 Gln Thr Lys Lys Arg Glu Lys Ile His Ile Pro Glu Arg Ser Asp Glu
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 Ala Gln Arg Val Phe Lys Ser Ser Lys Thr Ser Ser Cys Asp Lys Ser
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 Asp Thr Cys Phe

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 <213> Homo sapiens

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Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
35      40      45
Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
50      55      60
Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
65      70      75      80
Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
85      90      95
Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
100     105     110
Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
115     120     125
Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
130     135     140
Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
145     150     155     160
Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
165     170     175
Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
180     185     190
Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
195     200     205
Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210     215     220
Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225     230     235     240
Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245     250     255
Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
260     265     270
Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
275     280     285
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Leu Leu Leu Leu Ser
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<210> 8

<211> 290

<212> PRT

<213> Homo sapiens

<400> 8

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Gly Ser Asn Met Thr Ile Glu Cys Lys Phe Pro Val Glu Lys Gln Leu
35      40      45
Asp Leu Ala Ala Leu Ile Val Tyr Trp Glu Met Glu Asp Lys Asn Ile

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Ala	Ala	Leu	Gln	Ile	Thr	Asp	Val	Lys	Leu	Gln	Asp	Ala	Gly	Val	Tyr
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Arg	Cys	Met	Ile	Ser	Tyr	Gly	Gly	Ala	Asp	Tyr	Lys	Arg	Ile	Thr	Val
		115					120					125			
Lys	Val	Asn	Ala	Pro	Tyr	Asn	Lys	Ile	Asn	Gln	Arg	Ile	Leu	Val	Val
	130					135					140				
Asp	Pro	Val	Thr	Ser	Glu	His	Glu	Leu	Thr	Cys	Gln	Ala	Glu	Gly	Tyr
145					150					155					160
Pro	Lys	Ala	Glu	Val	Ile	Trp	Thr	Ser	Ser	Asp	His	Gln	Val	Leu	Ser
			165						170					175	
Gly	Lys	Thr	Thr	Thr	Thr	Asn	Ser	Lys	Arg	Glu	Glu	Lys	Leu	Phe	Asn
			180					185					190		
Val	Thr	Ser	Thr	Leu	Arg	Ile	Asn	Thr	Thr	Thr	Asn	Glu	Ile	Phe	Tyr
		195				200						205			
Cys	Thr	Phe	Arg	Arg	Leu	Asp	Pro	Glu	Glu	Asn	His	Thr	Ala	Glu	Leu
	210					215					220				
Val	Ile	Pro	Glu	Leu	Pro	Leu	Ala	His	Pro	Pro	Asn	Glu	Arg	Thr	His
225					230					235					240
Leu	Val	Ile	Leu	Gly	Ala	Ile	Leu	Leu	Cys	Leu	Gly	Val	Ala	Leu	Thr
			245						250					255	
Phe	Ile	Phe	Arg	Leu	Arg	Lys	Gly	Arg	Met	Met	Asp	Val	Lys	Lys	Cys
			260				265					270			
Gly	Ile	Gln	Asp	Thr	Asn	Ser	Lys	Lys	Gln	Ser	Asp	Thr	His	Leu	Glu
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Glu	Thr														
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<210> 9
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 <213> Homo sapiens

<400> 9

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Gly	Pro	Pro	Glu	Pro	Ile	Leu	Ala	Val	Val	Gly	Glu	Asp	Ala	Glu	Leu
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Pro	Cys	Arg	Leu	Ser	Pro	Asn	Ala	Ser	Ala	Glu	His	Leu	Glu	Leu	Arg
	50					55					60				
Trp	Phe	Arg	Lys	Lys	Val	Ser	Pro	Ala	Val	Leu	Val	His	Arg	Asp	Gly
65					70					75					80
Arg	Glu	Gln	Glu	Ala	Glu	Gln	Met	Pro	Glu	Tyr	Arg	Gly	Arg	Ala	Thr
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Leu	Val	Gln	Asp	Gly	Ile	Ala	Lys	Gly	Arg	Val	Ala	Leu	Arg	Ile	Arg
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Gly	Val	Arg	Val	Ser	Asp	Asp	Gly	Glu	Tyr	Thr	Cys	Phe	Phe	Arg	Glu
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Asp	Gly	Ser	Tyr	Glu	Glu	Ala	Leu	Val	His	Leu	Lys	Val	Ala	Ala	Leu
	130					135					140				

Gly	Ser	Asp	Pro	His	Ile	Ser	Met	Gln	Val	Gln	Glu	Asn	Gly	Glu	Ile
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Cys	Leu	Glu	Cys	Thr	Ser	Val	Gly	Trp	Tyr	Pro	Glu	Pro	Gln	Val	Gln
				165					170						175
Trp	Arg	Thr	Ser	Lys	Gly	Glu	Lys	Phe	Pro	Ser	Thr	Ser	Glu	Ser	Arg
			180					185					190		
Asn	Pro	Asp	Glu	Glu	Gly	Leu	Phe	Thr	Val	Ala	Ala	Ser	Val	Ile	Ile
		195					200					205			
Arg	Asp	Thr	Ser	Thr	Lys	Asn	Val	Ser	Cys	Tyr	Ile	Gln	Asn	Leu	Leu
	210					215					220				
Leu	Gly	Gln	Glu	Lys	Lys	Val	Glu	Ile	Ser	Ile	Pro	Ala	Ser	Ser	Leu
225					230					235					240
Pro	Arg	Leu	Thr	Pro	Trp	Ile	Val	Ala	Val	Ala	Val	Ile	Leu	Met	Val
				245					250					255	
Leu	Gly	Leu	Leu	Thr	Ile	Gly	Ser	Ile	Phe	Phe	Thr	Trp	Arg	Leu	Tyr
			260					265					270		
Asn	Glu	Arg	Pro	Arg	Glu	Arg	Arg	Asn	Glu	Phe	Ser	Ser	Lys	Glu	Arg
		275					280					285			
Leu	Leu	Glu	Glu	Leu	Lys	Trp	Lys	Lys	Ala	Thr	Leu	His	Ala	Val	Asp
	290					295					300				
Val	Thr	Leu	Asp	Pro	Asp	Thr	Ala	His	Pro	His	Leu	Phe	Leu	Tyr	Glu
305					310					315					320
Asp	Ser	Lys	Ser	Val	Arg	Leu	Glu	Asp	Ser	Arg	Gln	Lys	Leu	Pro	Glu
				325					330					335	
Lys	Thr	Glu	Arg	Phe	Asp	Ser	Trp	Pro	Cys	Val	Leu	Gly	Arg	Glu	Thr
			340					345					350		
Phe	Thr	Ser	Gly	Arg	His	Tyr	Trp	Glu	Val	Glu	Val	Gly	Asp	Arg	Thr
		355					360					365			
Asp	Trp	Ala	Ile	Gly	Val	Cys	Arg	Glu	Asn	Val	Met	Lys	Lys	Gly	Phe
	370					375					380				
Asp	Pro	Met	Thr	Pro	Glu	Asn	Gly	Phe	Trp	Ala	Val	Glu	Leu	Tyr	Gly
385					390					395					400
Asn	Gly	Tyr	Trp	Ala	Leu	Thr	Pro	Leu	Arg	Thr	Pro	Leu	Pro	Leu	Ala
				405					410					415	
Gly	Pro	Pro	Arg	Val	Gly	Ile	Phe	Leu	Asp	Tyr	Glu	Ser	Gly	Asp	
			420				425						430		
Ile	Ser	Phe	Tyr	Asn	Met	Asn	Asp	Gly	Ser	Asp	Ile	Tyr	Thr	Phe	Ser
		435					440					445			
Asn	Val	Thr	Phe	Ser	Gly	Pro	Leu	Arg	Pro	Phe	Phe	Cys	Leu	Trp	Ser
	450					455					460				
Ser	Gly	Lys	Lys	Pro	Leu	Thr	Ile	Cys	Pro	Ile	Ala	Asp	Gly	Pro	Glu
465					470					475					480
Arg	Val	Thr	Val	Ile	Ala	Asn	Ala	Gln	Asp	Leu	Ser	Lys	Glu	Ile	Pro
				485					490					495	
Leu	Ser	Pro	Met	Gly	Glu	Glu	Ser	Ala	Pro	Arg	Asp	Ala	Asp	Thr	Leu
			500					505					510		
His	Ser	Lys	Leu	Ile	Pro	Thr	Gln	Pro	Ser	Gln	Gly	Ala	Pro		
		515					520					525			

<210> 10
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 <212> PRT
 <213> Homo sapiens

<400> 10
 Met Glu Ser Ala Ala Ala Leu His Phe Ser Arg Pro Ala Ser Leu Leu

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Leu	Leu	Leu	Leu	Ser	Leu	Cys	Ala	Leu	Val	Ser	Ala	Gln	Phe	Ile	Val	
			20					25					30			
Val	Gly	Pro	Thr	Asp	Pro	Ile	Leu	Ala	Thr	Val	Gly	Glu	Asn	Thr	Thr	
		35					40					45				
Leu	Arg	Cys	His	Leu	Ser	Pro	Glu	Lys	Asn	Ala	Glu	Asp	Met	Glu	Val	
	50					55					60					
Arg	Trp	Phe	Arg	Ser	Gln	Phe	Ser	Pro	Ala	Val	Phe	Val	Tyr	Lys	Gly	
65					70					75					80	
Gly	Arg	Glu	Arg	Thr	Glu	Glu	Gln	Met	Glu	Glu	Tyr	Arg	Gly	Arg	Thr	
				85				90						95		
Thr	Phe	Val	Ser	Lys	Asp	Ile	Ser	Arg	Gly	Ser	Val	Ala	Leu	Val	Ile	
			100					105					110			
His	Asn	Ile	Thr	Ala	Gln	Glu	Asn	Gly	Thr	Tyr	Arg	Cys	Tyr	Phe	Gln	
	115					120						125				
Glu	Gly	Arg	Ser	Tyr	Asp	Glu	Ala	Ile	Leu	His	Leu	Val	Val	Ala	Gly	
	130					135					140					
Leu	Gly	Ser	Lys	Pro	Leu	Ile	Ser	Met	Arg	Gly	His	Glu	Asp	Gly	Gly	
145				150					155						160	
Ile	Arg	Leu	Glu	Cys	Ile	Ser	Arg	Gly	Trp	Tyr	Pro	Lys	Pro	Leu	Thr	
				165				170						175		
Val	Trp	Arg	Asp	Pro	Tyr	Gly	Gly	Val	Ala	Pro	Ala	Leu	Lys	Glu	Val	
			180					185					190			
Ser	Met	Pro	Asp	Ala	Asp	Gly	Leu	Phe	Met	Val	Thr	Thr	Ala	Val	Ile	
	195					200						205				
Ile	Arg	Asp	Lys	Ser	Val	Arg	Asn	Met	Ser	Cys	Ser	Ile	Asn	Asn	Thr	
	210				215					220						
Leu	Leu	Gly	Gln	Lys	Lys	Glu	Ser	Val	Ile	Phe	Ile	Pro	Glu	Ser	Phe	
225				230					235						240	
Met	Pro	Ser	Val	Ser	Pro	Cys	Ala	Val	Ala	Leu	Pro	Ile	Ile	Val	Val	
				245				250						255		
Ile	Leu	Met	Ile	Pro	Ile	Ala	Val	Cys	Ile	Tyr	Trp	Ile	Asn	Lys	Leu	
		260				265							270			
Gln	Lys	Glu	Lys	Lys	Ile	Leu	Ser	Gly	Glu	Lys	Glu	Phe	Glu	Arg	Glu	
	275					280						285				
Thr	Arg	Glu	Ile	Ala	Leu	Lys	Glu	Leu	Glu	Lys	Glu	Arg	Val	Gln	Lys	
	290					295					300					
Glu	Glu	Glu	Leu	Gln	Val	Lys	Glu	Lys	Leu	Gln	Glu	Glu	Leu	Arg	Trp	
305				310					315						320	
Arg	Arg	Thr	Phe	Leu	His	Ala	Val	Asp	Val	Val	Leu	Asp	Pro	Asp	Thr	
				325				330						335		
Ala	His	Pro	Asp	Leu	Phe	Leu	Ser	Glu	Asp	Arg	Arg	Ser	Val	Arg	Arg	
		340						345					350			
Cys	Pro	Phe	Arg	His	Leu	Gly	Glu	Ser	Val	Pro	Asp	Asn	Pro	Glu	Arg	
	355					360						365				
Phe	Asp	Ser	Gln	Pro	Cys	Val	Leu	Gly	Arg	Glu	Ser	Phe	Ala	Ser	Gly	
	370					375					380					
Lys	His	Tyr	Trp	Glu	Val	Glu	Val	Glu	Asn	Val	Ile	Glu	Trp	Thr	Val	
385				390					395						400	
Gly	Val	Cys	Arg	Asp	Ser	Val	Glu	Arg	Lys	Gly	Glu	Val	Leu	Leu	Ile	
				405				410						415		
Pro	Gln	Asn	Gly	Phe	Trp	Thr	Leu	Glu	Met	His	Lys	Gly	Gln	Tyr	Arg	
		420						425					430			
Ala	Val	Ser	Ser	Pro	Asp	Arg	Ile	Leu	Pro	Leu	Lys	Glu	Ser	Leu	Cys	
	435						440					445				
Arg	Val	Gly	Val	Phe	Leu	Asp	Tyr	Glu	Ala	Gly	Asp	Val	Ser	Phe	Tyr	
	450					455					460					

Asn	Met	Arg	Asp	Arg	Ser	His	Ile	Tyr	Thr	Cys	Pro	Arg	Ser	Ala	Phe
465					470					475					480
Ser	Val	Pro	Val	Arg	Pro	Phe	Phe	Arg	Leu	Gly	Cys	Glu	Asp	Ser	Pro
				485					490					495	
Ile	Phe	Ile	Cys	Pro	Ala	Leu	Thr	Gly	Ala	Asn	Gly	Val	Thr	Val	Pro
			500					505					510		
Glu	Glu	Gly	Leu	Thr	Leu	His	Arg	Val	Gly	Thr	His	Gln	Ser	Leu	
		515					520					525			

<210> 11
 <211> 523
 <212> PRT
 <213> Homo sapiens

<400> 11

Met	Glu	Pro	Ala	Ala	Ala	Leu	His	Phe	Ser	Leu	Pro	Ala	Ser	Leu	Leu
1				5					10					15	
Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Ser	Leu	Cys	Ala	Leu	Val	Ser	Ala
			20					25					30		
Gln	Phe	Thr	Val	Val	Gly	Pro	Ala	Asn	Pro	Ile	Leu	Ala	Met	Val	Gly
		35					40					45			
Glu	Asn	Thr	Thr	Leu	Arg	Cys	His	Leu	Ser	Pro	Glu	Lys	Asn	Ala	Glu
	50					55					60				
Asp	Met	Glu	Val	Arg	Trp	Phe	Arg	Ser	Gln	Phe	Ser	Pro	Ala	Val	Phe
65					70					75					80
Val	Tyr	Lys	Gly	Gly	Arg	Glu	Arg	Thr	Glu	Glu	Gln	Met	Glu	Glu	Tyr
				85					90					95	
Arg	Gly	Arg	Ile	Thr	Phe	Val	Ser	Lys	Asp	Ile	Asn	Arg	Gly	Ser	Val
			100					105					110		
Ala	Leu	Val	Ile	His	Asn	Val	Thr	Ala	Gln	Glu	Asn	Gly	Ile	Tyr	Arg
		115					120					125			
Cys	Tyr	Phe	Gln	Glu	Gly	Arg	Ser	Tyr	Asp	Glu	Ala	Ile	Leu	Arg	Leu
	130					135					140				
Val	Val	Ala	Gly	Leu	Gly	Ser	Lys	Pro	Leu	Ile	Glu	Ile	Lys	Ala	Gln
145					150					155					160
Glu	Asp	Gly	Ser	Ile	Trp	Leu	Glu	Cys	Ile	Ser	Gly	Gly	Trp	Tyr	Pro
				165				170						175	
Glu	Pro	Leu	Thr	Val	Trp	Arg	Asp	Pro	Tyr	Gly	Glu	Val	Val	Pro	Ala
			180				185						190		
Leu	Lys	Glu	Val	Ser	Ile	Ala	Asp	Ala	Asp	Gly	Leu	Phe	Met	Val	Thr
		195					200					205			
Thr	Ala	Val	Ile	Ile	Arg	Asp	Lys	Tyr	Val	Arg	Asn	Val	Ser	Cys	Ser
	210					215					220				
Val	Asn	Asn	Thr	Leu	Leu	Gly	Gln	Glu	Lys	Glu	Thr	Val	Ile	Phe	Ile
225					230					235					240
Pro	Glu	Ser	Phe	Met	Pro	Ser	Ala	Ser	Pro	Trp	Met	Val	Ala	Leu	Ala
				245					250					255	
Val	Ile	Leu	Thr	Ala	Ser	Pro	Trp	Met	Val	Ser	Met	Thr	Val	Ile	Leu
			260					265					270		
Ala	Val	Phe	Ile	Ile	Phe	Met	Ala	Val	Ser	Ile	Cys	Cys	Ile	Lys	Lys
		275					280					285			
Leu	Gln	Arg	Glu	Lys	Lys	Ile	Leu	Ser	Gly	Glu	Lys	Lys	Val	Glu	Gln
	290					295					300				
Glu	Glu	Lys	Glu	Ile	Ala	Gln	Gln	Leu	Gln	Glu	Leu	Arg	Trp	Arg	
305					310					315				320	
Arg	Thr	Phe	Leu	His	Ala	Ala	Asp	Val	Val	Leu	Asp	Pro	Asp	Thr	Ala

				325					330					335			
His	Pro	Glu	Leu	Phe	Leu	Ser	Glu	Asp	Arg	Arg	Ser	Val	Arg	Arg	Gly		
			340						345					350			
Pro	Tyr	Arg	Gln	Arg	Val	Pro	Asp	Asn	Pro	Glu	Arg	Phe	Asp	Ser	Gln		
		355						360					365				
Pro	Cys	Val	Leu	Gly	Trp	Glu	Ser	Phe	Ala	Ser	Gly	Lys	His	Tyr	Trp		
	370					375					380						
Glu	Val	Glu	Val	Glu	Asn	Val	Met	Val	Trp	Thr	Val	Gly	Val	Cys	Arg		
385					390					395					400		
His	Ser	Val	Glu	Arg	Lys	Gly	Glu	Val	Leu	Leu	Ile	Pro	Gln	Asn	Gly		
				405					410					415			
Phe	Trp	Thr	Leu	Glu	Met	Phe	Gly	Asn	Gln	Tyr	Arg	Ala	Leu	Ser	Ser		
			420					425					430				
Pro	Glu	Arg	Ile	Leu	Pro	Leu	Lys	Glu	Ser	Leu	Cys	Arg	Val	Gly	Val		
		435					440					445					
Phe	Leu	Asp	Tyr	Glu	Ala	Gly	Asp	Val	Ser	Phe	Tyr	Asn	Met	Arg	Asp		
	450					455					460						
Arg	Ser	His	Ile	Tyr	Thr	Cys	Pro	Arg	Ser	Ala	Phe	Thr	Val	Pro	Val		
465					470				475					480			
Arg	Pro	Phe	Phe	Arg	Leu	Gly	Ser	Asp	Asp	Ser	Pro	Ile	Phe	Ile	Cys		
				485				490						495			
Pro	Ala	Leu	Thr	Gly	Ala	Ser	Gly	Val	Met	Val	Pro	Glu	Glu	Gly	Leu		
		500						505					510				
Lys	Leu	His	Arg	Val	Gly	Thr	His	Gln	Ser	Leu							
		515					520										

<210> 12
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 12

Met	Lys	Met	Ala	Ser	Ser	Leu	Ala	Phe	Leu	Leu	Leu	Asn	Phe	His	Val		
1				5					10					15			
Ser	Leu	Leu	Leu	Val	Gln	Leu	Leu	Thr	Pro	Cys	Ser	Ala	Gln	Phe	Ser		
			20					25					30				
Val	Leu	Gly	Pro	Ser	Gly	Pro	Ile	Leu	Ala	Met	Val	Gly	Glu	Asp	Ala		
	35					40						45					
Asp	Leu	Pro	Cys	His	Leu	Phe	Pro	Thr	Met	Ser	Ala	Glu	Thr	Met	Glu		
	50				55					60							
Leu	Lys	Trp	Val	Ser	Ser	Leu	Arg	Gln	Val	Val	Asn	Val	Tyr	Ala			
65				70				75						80			
Asp	Gly	Lys	Glu	Val	Glu	Asp	Arg	Gln	Ser	Ala	Pro	Tyr	Arg	Gly	Arg		
			85					90					95				
Thr	Ser	Ile	Leu	Arg	Asp	Gly	Ile	Thr	Ala	Gly	Lys	Ala	Ala	Leu	Arg		
		100					105						110				
Ile	His	Asn	Val	Thr	Ala	Ser	Asp	Ser	Gly	Lys	Tyr	Leu	Cys	Tyr	Phe		
	115					120						125					
Gln	Asp	Gly	Asp	Phe	Tyr	Glu	Lys	Ala	Leu	Val	Glu	Leu	Lys	Val	Ala		
	130					135					140						
Ala	Leu	Gly	Ser	Asn	Leu	His	Val	Glu	Val	Lys	Gly	Tyr	Glu	Asp	Gly		
145				150					155					160			
Gly	Ile	His	Leu	Glu	Cys	Arg	Ser	Thr	Gly	Trp	Tyr	Pro	Gln	Pro	Gln		
			165					170					175				
Ile	Gln	Trp	Ser	Asn	Ala	Lys	Gly	Glu	Asn	Ile	Pro	Ala	Val	Glu	Ala		
		180					185						190				

Pro	Val	Val	Ala	Asp	Gly	Val	Gly	Leu	Tyr	Glu	Val	Ala	Ala	Ser	Val
		195					200					205			
Ile	Met	Arg	Gly	Gly	Ser	Gly	Glu	Gly	Val	Ser	Cys	Ile	Ile	Arg	Asn
	210					215					220				
Ser	Leu	Leu	Gly	Leu	Glu	Lys	Thr	Ala	Ser	Ile	Ser	Ile	Ala	Asp	Pro
	225					230					235				240
Phe	Phe	Arg	Ser	Ala	Gln	Pro	Trp	Ile	Ala	Ala	Leu	Ala	Gly	Thr	Leu
				245					250					255	
Pro	Ile	Leu	Leu	Leu	Leu	Leu	Ala	Gly	Ala	Ser	Tyr	Phe	Leu	Trp	Arg
			260					265					270		
Gln	Gln	Lys	Glu	Ile	Thr	Ala	Leu	Ser	Ser	Glu	Ile	Glu	Ser	Glu	Gln
		275						280				285			
Glu	Met	Lys	Glu	Met	Gly	Tyr	Ala	Ala	Thr	Glu	Arg	Glu	Ile	Ser	Leu
	290					295					300				
Arg	Glu	Ser	Leu	Gln	Glu	Glu	Leu	Lys	Arg	Lys	Lys	Ser	Ser	Thr	
	305				310					315					

<210> 13
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 <212> PRT
 <213> Homo sapiens

<400> 13

Met	Glu	Ser	Ala	Ala	Ala	Leu	His	Phe	Ser	Arg	Pro	Ala	Ser	Leu	Leu
1				5					10					15	
Leu	Leu	Leu	Leu	Ser	Leu	Cys	Ala	Leu	Val	Ser	Ala	His	Phe	Ile	Val
			20					25					30		
Val	Gly	Pro	Thr	Asp	Pro	Ile	Leu	Ala	Thr	Val	Gly	Glu	Asn	Thr	Thr
		35				40					45				
Leu	Arg	Cys	His	Leu	Ser	Pro	Glu	Lys	Asn	Ala	Glu	Asp	Met	Glu	Val
	50					55				60					
Arg	Trp	Phe	Arg	Ser	Gln	Phe	Ser	Pro	Ala	Val	Phe	Val	Tyr	Lys	Gly
	65				70				75					80	
Gly	Arg	Glu	Arg	Thr	Glu	Glu	Gln	Met	Glu	Glu	Tyr	Arg	Gly	Arg	Thr
				85				90					95		
Thr	Phe	Val	Ser	Lys	Asp	Ile	Ser	Arg	Gly	Ser	Val	Ala	Leu	Val	Ile
			100					105					110		
His	Asn	Ile	Thr	Ala	Gln	Gly	Asn	Gly	Thr	Tyr	Arg	Cys	Tyr	Phe	Gln
	115					120						125			
Glu	Gly	Arg	Ser	Tyr	Asp	Glu	Ala	Ile	Leu	His	Leu	Val	Val	Ala	Glu
	130					135					140				
Arg	Leu	Gly	Ser	Lys	Pro	Leu	Ile	Ser	Met	Arg	Gly	His	Glu	Asp	Gly
	145				150				155					160	
Gly	Ile	Arg	Leu	Glu	Cys	Ile	Ser	Arg	Gly	Trp	Tyr	Pro	Lys	Pro	Leu
				165					170					175	
Thr	Val	Trp	Arg	Asp	Pro	Tyr	Gly	Gly	Val	Ala	Pro	Ala	Leu	Lys	Glu
			180					185					190		
Val	Ser	Met	Pro	Asp	Ala	Asp	Gly	Leu	Phe	Met	Val	Thr	Thr	Ala	Val
		195					200					205			
Ile	Ile	Arg	Asp	Lys	Ser	Val	Arg	Asn	Met	Ser	Cys	Ser	Ile	Asn	Asn
	210					215					220				
Thr	Leu	Leu	Gly	Gln	Lys	Glu	Ser	Val	Ile	Phe	Ile	Pro	Glu	Ser	
	225				230				235					240	
Phe	Met	Pro	Ser	Val	Ser	Pro	Leu	Ala	Val	Cys	Ile	Tyr	Trp	Ile	Asn
				245					250					255	
Lys	Leu	Gln	Lys	Glu	Lys	Lys	Ile	Leu	Ser	Gly	Glu	Lys	Glu	Phe	Glu

	260		265		270										
Arg	Glu	Thr	Arg	Glu	Ile	Ala	Leu	Lys	Glu	Leu	Glu	Lys	Glu	Arg	Val
	275						280					285			
Gln	Lys	Glu	Glu	Glu	Leu	Gln	Val	Lys	Glu	Lys	Leu	Gln	Glu	Glu	Leu
	290					295					300				
Arg	Trp	Arg	Arg	Thr	Phe	Leu	His	Ala	Val	Asp	Val	Val	Leu	Asp	Pro
305					310					315					320
Asp	Thr	Ala	His	Pro	Asp	Leu	Phe	Leu	Ser	Glu	Asp	Arg	Arg	Ser	Val
			325						330					335	
Arg	Arg	Cys	Pro	Phe	Arg	His	Leu	Gly	Glu	Ser	Val	Pro	Asp	Asn	Pro
		340						345					350		
Glu	Arg	Phe	Asp	Ser	Gln	Pro	Cys	Val	Leu	Gly	Arg	Glu	Ser	Phe	Ala
	355						360					365			
Ser	Gly	Lys	His	Tyr	Trp	Glu	Val	Glu	Val	Glu	Asn	Val	Ile	Glu	Trp
	370					375					380				
Thr	Val	Gly	Val	Cys	Arg	Asp	Ser	Val	Glu	Arg	Lys	Gly	Glu	Val	Leu
385					390					395					400
Leu	Ile	Pro	Gln	Asn	Gly	Phe	Trp	Thr	Leu	Glu	Met	His	Lys	Gly	Gln
			405						410					415	
Tyr	Arg	Ala	Val	Ser	Ser	Pro	Asp	Arg	Ile	Leu	Pro	Leu	Lys	Glu	Ser
		420						425					430		
Leu	Cys	Arg	Val	Gly	Val	Phe	Leu	Asp	Tyr	Glu	Ala	Gly	Asp	Val	Ser
	435						440					445			
Phe	Tyr	Asn	Met	Arg	Asp	Arg	Ser	His	Ile	Tyr	Thr	Cys	Pro	Arg	Ser
	450					455				460					
Ala	Phe	Ser	Gly	Pro	Asp	Thr	Ser	Gln	Ser	Gly	Asp	Pro	Pro	Glu	Pro
465					470					475					480
Ile	Glu	Ser	Ile	Pro	Trp	Ser	His	Ser	His	Val	Asp	Lys	Pro	Trp	Ser
				485					490					495	
Phe	Gln	Gln	Pro	Pro	His	Asn	Thr	His	Leu	Pro	Ala	Ala	Ser	Phe	Thr
		500						505					510		
Pro	Thr	Thr	Asp	Leu	Ser	Pro	Ser	Phe	Leu	Leu	Leu	Thr	Arg	Leu	Cys
	515						520					525			
Phe															

<210> 14
 <211> 357
 <212> PRT
 <213> Homo sapiens

<400> 14															
Met	Ala	Ser	Ser	Leu	Ala	Phe	Leu	Leu	Leu	Asn	Phe	His	Val	Ser	Leu
1				5					10					15	
Leu	Leu	Val	Gln	Leu	Leu	Thr	Pro	Cys	Ser	Ala	Gln	Phe	Ser	Val	Leu
		20						25					30		
Gly	Pro	Ser	Gly	Pro	Ile	Leu	Ala	Met	Val	Gly	Glu	Asp	Ala	Asp	Leu
	35					40						45			
Pro	Cys	His	Leu	Phe	Pro	Thr	Met	Ser	Ala	Glu	Thr	Met	Glu	Leu	Lys
	50					55					60				
Trp	Val	Ser	Ser	Ser	Leu	Arg	Gln	Val	Val	Asn	Val	Tyr	Ala	Asp	Gly
65					70					75				80	
Lys	Glu	Val	Glu	Asp	Arg	Gln	Ser	Ala	Pro	Tyr	Arg	Gly	Arg	Thr	Ser
				85					90					95	
Ile	Leu	Arg	Asp	Gly	Ile	Thr	Ala	Gly	Lys	Ala	Ala	Leu	Arg	Ile	His
			100					105					110		

Asn	Val	Thr	Ala	Ser	Asp	Ser	Gly	Lys	Tyr	Leu	Cys	Tyr	Phe	Gln	Asp		
		115					120					125					
Gly	Asp	Phe	Tyr	Glu	Lys	Ala	Leu	Val	Glu	Leu	Lys	Val	Ala	Ala	Leu		
	130					135					140						
Gly	Ser	Asn	Leu	His	Val	Glu	Val	Lys	Gly	Tyr	Glu	Asp	Gly	Gly	Ile		
	145				150					155					160		
His	Leu	Glu	Cys	Arg	Ser	Thr	Gly	Trp	Tyr	Pro	Gln	Pro	Gln	Ile	Gln		
			165						170					175			
Trp	Ser	Asn	Ala	Lys	Gly	Glu	Asn	Ile	Pro	Ala	Val	Glu	Ala	Pro	Val		
		180					185						190				
Val	Ala	Asp	Gly	Val	Gly	Leu	Tyr	Glu	Val	Ala	Ala	Ser	Val	Ile	Met		
	195						200					205					
Arg	Gly	Gly	Ser	Gly	Glu	Gly	Val	Ser	Cys	Ile	Ile	Arg	Asn	Ser	Leu		
	210					215					220						
Leu	Gly	Leu	Glu	Lys	Thr	Ala	Ser	Ile	Ser	Ile	Ala	Asp	Pro	Phe	Phe		
	225				230					235					240		
Arg	Ser	Ala	Gln	Pro	Trp	Ile	Ala	Ala	Leu	Ala	Gly	Thr	Leu	Pro	Ile		
			245						250					255			
Leu	Leu	Leu	Leu	Leu	Ala	Gly	Ala	Ser	Tyr	Phe	Leu	Trp	Arg	Gln	Gln		
		260				265							270				
Lys	Glu	Ile	Thr	Ala	Leu	Ser	Ser	Glu	Ile	Glu	Ser	Glu	Gln	Glu	Met		
	275					280					285						
Lys	Glu	Met	Gly	Tyr	Ala	Ala	Thr	Glu	Arg	Glu	Ile	Ser	Leu	Arg	Glu		
	290				295						300						
Ser	Leu	Gln	Glu	Glu	Leu	Lys	Arg	Lys	Lys	Ile	Gln	Tyr	Leu	Thr	Arg		
	305				310					315					320		
Gly	Glu	Glu	Ser	Leu	Ser	Asp	Thr	Asn	Lys	Ser	Ala	Leu	Met	Leu	Lys		
			325						330					335			
Trp	Lys	Lys	Ala	Leu	Phe	Lys	Pro	Gly	Glu	Glu	Met	Leu	Gln	Met	Arg		
		340						345					350				
Leu	His	Leu	Val	Lys													
		355															

<210> 15
 <211> 731
 <212> PRT
 <213> Homo sapiens

<220>

<221> VARIANT

<222> 248, 249, 250, 254, 261, 264, 280, 299, 400, 411, 429

<223> Xaa = Any Amino Acid

<400> 15

Met	Ala	Ser	Ser	Leu	Ala	Phe	Leu	Leu	Leu	Asn	Phe	His	Val	Ser	Leu		
1				5					10					15			
Phe	Leu	Val	Gln	Leu	Leu	Thr	Pro	Cys	Ser	Ala	Gln	Phe	Ser	Val	Leu		
		20						25					30				
Gly	Pro	Ser	Gly	Pro	Ile	Leu	Ala	Met	Val	Gly	Glu	Asp	Ala	Asp	Leu		
	35					40					45						
Pro	Cys	His	Leu	Phe	Pro	Thr	Met	Ser	Ala	Glu	Thr	Met	Glu	Leu	Arg		
	50				55					60							
Trp	Val	Ser	Ser	Ser	Leu	Arg	Gln	Val	Val	Asn	Val	Tyr	Ala	Asp	Gly		
	65				70				75					80			
Lys	Glu	Val	Glu	Tyr	Arg	Gln	Ser	Ala	Pro	Tyr	Arg	Gly	Arg	Thr	Ser		

17

Cys	Glu	Ser	Phe	Met	Ser	Glu	Arg	His	Tyr	Trp	Glu	Val	Glu	Val	Gly	545	550	555	560
Asp	Arg	Lys	Glu	Trp	His	Ile	Gly	Val	Cys	Ser	Lys	Asn	Val	Glu	Arg		565	570	575
Lys	Lys	Val	Trp	Val	Lys	Met	Thr	Pro	Glu	Asn	Gly	Tyr	Trp	Thr	Met		580	585	590
Gly	Leu	Thr	Asp	Gly	Asn	Lys	Tyr	Arg	Ala	Leu	Thr	Glu	Pro	Arg	Thr		595	600	605
Asn	Leu	Lys	Leu	Pro	Glu	Pro	Pro	Arg	Lys	Val	Gly	Val	Ile	Leu	Asp		610	615	620
Tyr	Glu	Thr	Gly	His	Ile	Ser	Phe	Tyr	Asn	Ala	Thr	Asp	Gly	Ser	His		625	630	635
Ile	Tyr	Thr	Phe	Leu	His	Ala	Ser	Ser	Ser	Glu	Pro	Leu	Tyr	Pro	Val		645	650	655
Phe	Arg	Ile	Leu	Thr	Leu	Glu	Pro	Thr	Ala	Leu	Thr	Val	Cys	Pro	Ile		660	665	670
Pro	Lys	Val	Glu	Ser	Ser	Pro	Asp	Pro	Asp	Leu	Val	Pro	Asp	His	Ser		675	680	685
Leu	Glu	Ile	Pro	Leu	Thr	Pro	Gly	Leu	Ala	Asn	Glu	Ser	Gly	Glu	Pro		690	695	700
Gln	Ala	Glu	Val	Thr	Ser	Leu	Leu	Leu	Pro	Ala	Gln	Pro	Gly	Ala	Lys		705	710	715
Gly	Leu	Thr	Leu	His	Asn	Ser	Gln	Ser	Glu	Pro							725	730	720

<210> 16
 <211> 584
 <212> PRT
 <213> Homo sapiens

<400> 16

Met	Lys	Met	Ala	Ser	Ser	Leu	Ala	Phe	Leu	Leu	Leu	Asn	Phe	His	Val	1	5	10	15
Ser	Leu	Phe	Leu	Val	Gln	Leu	Leu	Thr	Pro	Cys	Ser	Ala	Gln	Phe	Ser		20	25	30
Val	Leu	Gly	Pro	Ser	Gly	Pro	Ile	Leu	Ala	Met	Val	Gly	Glu	Asp	Ala		35	40	45
Asp	Leu	Pro	Cys	His	Leu	Phe	Pro	Thr	Met	Ser	Ala	Glu	Thr	Met	Glu		50	55	60
Leu	Arg	Trp	Val	Ser	Ser	Leu	Arg	Gln	Val	Val	Asn	Val	Tyr	Ala			65	70	75
Asp	Gly	Lys	Glu	Val	Glu	Asp	Arg	Gln	Ser	Ala	Pro	Tyr	Arg	Gly	Arg		85	90	95
Thr	Ser	Ile	Leu	Arg	Asp	Gly	Ile	Thr	Ala	Gly	Lys	Ala	Ala	Leu	Arg		100	105	110
Ile	His	Asn	Val	Thr	Ala	Ser	Asp	Ser	Gly	Lys	Tyr	Leu	Cys	Tyr	Phe		115	120	125
Gln	Asp	Gly	Asp	Phe	Tyr	Glu	Lys	Ala	Leu	Val	Glu	Leu	Lys	Val	Ala		130	135	140
Ala	Leu	Gly	Ser	Asp	Leu	His	Ile	Glu	Val	Lys	Gly	Tyr	Glu	Asp	Gly		145	150	155
Gly	Ile	His	Leu	Glu	Cys	Arg	Ser	Thr	Gly	Trp	Tyr	Pro	Gln	Pro	Gln		165	170	175
Ile	Lys	Trp	Ser	Asp	Thr	Lys	Gly	Glu	Asn	Ile	Pro	Ala	Val	Glu	Ala		180	185	190
Pro	Val	Val	Ala	Asp	Gly	Val	Gly	Leu	Tyr	Ala	Val	Ala	Ala	Ser	Val				

Met Ala Ser Phe Leu Ala Phe Leu Leu Leu Asn Phe Arg Val Cys Leu
 1 5 10 15
 Leu Leu Leu Gln Leu Leu Met Pro His Ser Ala Gln Phe Ser Val Leu
 20 25 30
 Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala Asp Leu
 35 40 45
 Pro Cys His Leu Phe Pro Thr Met Ser Ala Glu Thr Met Glu Leu Lys
 50 55 60
 Trp Val Ser Ser Ser Leu Arg Gln Val Val Asn Val Tyr Ala Asp Gly
 65 70 75 80
 Lys Glu Val Glu Asp Arg Gln Ser Ala Pro Tyr Arg Gly Arg Thr Ser
 85 90 95
 Ile Leu Arg Asp Gly Ile Thr Ala Gly Lys Ala Ala Phe Arg Ile His
 100 105 110
 Asn Val Thr Gly Ser Asp Arg Trp Lys Tyr Leu Cys Tyr Phe Gln Asp
 115 120 125
 Gly Asp Phe Tyr Glu Lys Ala Leu Val Glu Leu Lys Val Ala Ala Leu
 130 135 140
 Gly Ser Asp Leu His Val Asp Val Lys Gly Tyr Lys Asp Gly Gly Ile
 145 150 155 160
 His Leu Glu Cys Arg Ser Thr Gly Trp Tyr Pro Gln Pro Gln Ile Gln
 165 170 175
 Trp Ser Asn Asn Lys Gly Glu Asn Ile Pro Thr Val Glu Ala Pro Val
 180 185 190
 Val Ala Asp Gly Val Gly Leu Tyr Ala Val Ala Ala Ser Val Ile Met
 195 200 205
 Arg Gly Ser Ser Gly Glu Gly Val Ser Cys Thr Ile Arg Asn Ser Leu
 210 215 220
 Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Arg Pro Phe Phe
 225 230 235 240
 Arg Ser Ala Gln Arg Trp Ile Ala Ala Leu Ala Gly Thr Leu Pro Val
 245 250 255
 Leu Leu Leu Leu Gly Gly Ala Gly Tyr Phe Leu Trp Gln Gln Gln
 260 265 270
 Glu Glu Lys Lys Thr Gln Phe Arg Lys Lys Lys Arg Glu Gln Glu Leu
 275 280 285
 Arg Glu Met Ala Trp Ser Thr Met Lys Gln Glu Gln Ser Thr Arg Val
 290 295 300
 Lys Leu Leu Glu Glu Leu Arg Trp Arg Ser Ile Gln Tyr Ala Ser Arg
 305 310 315 320
 Gly Glu Arg His Ser Ala Tyr Asn Glu Trp Lys Lys Ala Leu Phe Lys
 325 330 335
 Pro Gly Glu Glu Met Leu Gln Met Arg Leu His Phe Val Lys
 340 345 350

<210> 18
 <211> 513
 <212> PRT
 <213> Homo sapiens

<400> 18
 Met Lys Met Ala Ser Phe Leu Ala Phe Leu Leu Leu Asn Phe Arg Val
 1 5 10 15
 Cys Leu Leu Leu Leu Gln Leu Leu Met Pro His Ser Ala Gln Phe Ser
 20 25 30
 Val Leu Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala

Val Phe Arg Ile Leu Thr Leu Glu Pro Thr Ala Leu Ser Ile Cys Pro
 500 505 510
 Ala

<210> 19
 <211> 290
 <212> PRT
 <213> Homo sapiens

<400> 19
 Met Ala Ser Phe Leu Ala Phe Leu Leu Leu Asn Phe Arg Val Cys Leu
 1 5 10 15
 Leu Leu Leu Gln Leu Leu Met Pro His Ser Ala Gln Phe Ser Val Leu
 20 25 30
 Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala Asp Leu
 35 40 45
 Pro Cys His Leu Phe Pro Thr Met Ser Ala Glu Thr Met Glu Leu Lys
 50 55 60
 Trp Val Ser Ser Ser Leu Arg Gln Val Val Asn Val Tyr Ala Asp Gly
 65 70 75 80
 Lys Glu Val Glu Asp Arg Gln Ser Ala Pro Tyr Arg Gly Arg Thr Ser
 85 90 95
 Ile Leu Arg Asp Gly Ile Thr Ala Gly Lys Ala Ala Phe Arg Ile His
 100 105 110
 Asn Val Thr Gly Ser Asp Arg Trp Lys Tyr Leu Cys Tyr Phe Gln Asp
 115 120 125
 Gly Asp Phe Tyr Glu Lys Ala Leu Val Glu Leu Lys Val Ala Ala Leu
 130 135 140
 Gly Ser Asp Leu His Val Asp Val Lys Gly Tyr Lys Asp Gly Gly Ile
 145 150 155 160
 His Leu Glu Cys Arg Ser Thr Gly Trp Tyr Pro Gln Pro Gln Ile Gln
 165 170 175
 Trp Ser Asn Asn Lys Gly Glu Asn Ile Pro Thr Val Glu Ala Pro Val
 180 185 190
 Val Ala Asp Gly Val Gly Leu Tyr Ala Val Ala Ala Ser Val Ile Met
 195 200 205
 Arg Gly Ser Ser Gly Glu Gly Val Ser Cys Thr Ile Arg Asn Ser Leu
 210 215 220
 Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Arg Pro Phe Phe
 225 230 235 240
 Arg Ser Ala Gln Arg Trp Ile Ala Ala Leu Ala Gly Thr Leu Pro Val
 245 250 255
 Leu Leu Leu Leu Leu Gly Gly Ala Gly Tyr Phe Leu Trp Gln Gln Gln
 260 265 270
 Glu Glu Lys Lys Thr Gln Phe Arg Lys Lys Lys Arg Glu Gln Glu Leu
 275 280 285
 Arg Glu
 290

<210> 20
 <211> 819
 <212> DNA
 <213> Homo sapiens

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<400> 20
atgatcttcc tcttgctaata gttgagcctg gaattgcagc ttcaccagat agcagcttta 60
ttcacagtga cagtccctaa ggaactgtac ataataagagc atggcagcaa tgtgacctg 120
gaatgcaact ttgacactgg aagtcattgtg aaccttggag caataacagc cagtttgcaa 180
aaggtggaaa atgatacatc cccacaccgt gaaagagcca ctttgctgga ggagcagctg 240
cccctagggg aggcctcggt ccacatacct caagtccaag tgagggacga aggacagtac 300
caatgcataa tcatctatgg ggtcgcctgg gactacaagt acctgactct gaaagtcaaa 360
gcttcctaca ggaaaataaa cactcacatc cttaaagggtc cagaaacaga tgaggtagag 420
ctcacctgcc aggtacaggg ttatcctctg gcagaagtat cctggccaaa cgtcagcgtt 480
cctgccaaac ccagccactc caggaccctt gaaggcctct accaggtcac cagtgttctg 540
cgcctaaagc cccccctggg cagaaacttc agctgtgtgt tctggaatac tcacgtgagg 600
gaacttactt tggccagcat tgaccttcaa agtcagatgg aaccaggac ccattccaact 660
tggtgtcttc acattttcat cccctcctgc atcattgctt tcattttcat agccacagtg 720
atagccctaa gaaaacaact ctgtcaaaag ctgtattctt caaaagacac aacaaaaaga 780
cctgtcacca caacaaagag ggaagtgaac agtgctatc 819

```

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<210> 21
<211> 549
<212> DNA
<213> Homo sapiens

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```

<400> 21
atgatcttcc tcttgctaata gttgagcctg gaattgcagc ttcaccagat agcagcttta 60
ttcacagtga cagtccctaa ggaactgtac ataataagagc atggcagcaa tgtgacctg 120
gaatgcaact ttgacactgg aagtcattgtg aaccttggag caataacagc cagtttgcaa 180
aaggtggaaa atgatacatc cccacaccgt gaaagagcca ctttgctgga ggagcagctg 240
cccctagggg aggcctcggt ccacatacct caagtccaag tgagggacga aggacagtac 300
caatgcataa tcatctatgg ggtcgcctgg gactacaagt acctgactct gaaagtcaaa 360
ggtcagatgg aaccaggac ccattccaact tgggtgtctt acattttcat cccctcctgc 420
atcattgctt tcattttcat agccacagtg atagccctaa gaaaacaact ctgtcaaaag 480
ctgtattctt caaaagacac aacaaaaaga cctgtcacca caacaaagag ggaagtgaac 540
agtgctatc 549

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<210> 22
<211> 873
<212> DNA
<213> Homo sapiens

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```

<400> 22
atgaggatat ttgctgtctt tatattcatg acctactggc atttgctgaa cgcatttact 60
gtcacgggtc ccaaggacct atatgtggtg gagtatggtg gcaatatgac aattgaatgc 120
aaattcccag tagaaaaaca attagacctg gctgcactaa ttgtctattg ggaaatggag 180
gataagaaca ttattcaatt tgtgcatgga gaggaagacc tgaagggtca gcatagtagc 240
tacagacaga gggcccggct gttgaaggac cagctctccc tgggaaatgc tgcacttcag 300
atcacagatg tgaaattgca ggatgcaggg gtgtaccgct gcatgatcag ctatggtggt 360
gccgactaca agcgaattac tgtgaaagtc aatgccccat acaacaaaat caaccaaaga 420
attttggttg tggatccagt cacctctgaa catgaactga catgtcaggc tgagggtctac 480
cccaaggccg aagtcattctg gacaagcagt gaccatcaag tcttgagtgg taagaccacc 540
accaccaatt ccaagagaga ggagaagctt ttcaatgtga ccagcacact gagaatcaac 600
acaacaacta atgagatttt ctactgcact tttaggagat tagatcctga ggaaaaccat 660
acagctgaat tggatcatccc agaactacct ctggcacatc ctccaaatga aaggactcac 720
ttggttaattc tgggagccat cttattatgc cttggtgtag cactgacatt catcttccgt 780
ttaagaaaag ggagaatgat ggatgtgaaa aaatgtggca tccaagatac aaactcaaag 840
aagcaaagtg atacacattt ggaggagacg taa 873

```

```

<210> 23
<211> 951

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<212> DNA
<213> Homo sapiens

<400> 23

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atgctgctgc ggcggggcag ccctggcatg ggtgtgcatg tgggtgcagc cctgggagca 60
ctgtggttct gcctcacagg agccctggag gtccagggtcc ctgaagacct agtggtggca 120
ctggtgggca ccgatgccac cctgtgctgc tccttctccc ctgagcctgg cttcagcctg 180
gcacagctca acctcatctg gcagctgaca gacaccaaac agctggtgca cagctttgct 240
gagggccagg accagggcag cgcctatgcc aaccgcacgg ccctcttccc ggacctgctg 300
gcacagggca atgcatccct gaggtctgag cgcgtgctg tggcggacga gggcagcttc 360
acctgcttcg tgagcatccg ggatttcggc agcgtgccc tcagcctgca ggtggccgct 420
ccctactcga agcccagcat gaccctggag cccaacaagg acctgcggcc aggggacacg 480
gtgaccatca cgtgctccag ctaccagggc taccctgagg ctgaggtgtt ctggcaggat 540
gggcagggtg tgccctgac tggcaacgtg accacgtcgc agatggccaa cgagcagggc 600
ttgtttgatg tgcacagcgt cctgcgggtg gtgctgggtg caaatggcac ctacagctgc 660
ctggtgcgca acccctgct gcagcaggat gcgcacggct ctgtcaccat cacagggcag 720
cctatgacat tccccccaga ggccctgtgg gtgaccgtgg ggctgtctgt ctgtctcatt 780
gcactgctgg tggccctggc ttctgtgtgc tggagaaaga tcaaacagag ctgtgaggag 840
gagaatgcag gagctgagga ccaggatggg gagggagaag gctccaagac agccctgcag 900
cctctgaaac actctgacag caaagaagat gatggacaag aaatagcctg a 951

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<210> 24

<211> 316

<212> PRT

<213> Homo sapiens

<400> 24

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Met Leu Arg Arg Arg Gly Ser Pro Gly Met Gly Val His Val Gly Ala
 1           5           10           15
Ala Leu Gly Ala Leu Trp Phe Cys Leu Thr Gly Ala Leu Glu Val Gln
 20           25           30
Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp Ala Thr Leu
 35           40           45
Cys Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn
 50           55           60
Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe Ala
 65           70           75           80
Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe
 85           90           95
Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val
 100          105          110
Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg Asp
 115          120          125
Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys
 130          135          140
Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr
 145          150          155          160
Val Thr Ile Thr Cys Ser Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val
 165          170          175
Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Thr
 180          185          190
Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Val Leu
 195          200          205
Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn
 210          215          220
Pro Val Leu Gln Gln Asp Ala His Gly Ser Val Thr Ile Thr Gly Gln
 225          230          235          240

```


Pro Met Thr Phe Pro Pro Glu Ala Leu Trp Val Thr Val Gly Leu Ser
245 250 255
Val Cys Leu Ile Ala Leu Leu Val Ala Leu Ala Phe Val Cys Trp Arg
260 265 270
Lys Ile Lys Gln Ser Cys Glu Glu Asn Ala Gly Ala Glu Asp Gln
275 280 285
Asp Gly Glu Gly Glu Gly Ser Lys Thr Ala Leu Gln Pro Leu Lys His
290 295 300
Ser Asp Ser Lys Glu Asp Asp Gly Gln Glu Ile Ala
305 310 315

<210> 25
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer

<400> 25
ctcgaggaat tcgccgccat gatcttcctc ctgctaatt 38

<210> 26
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer

<221> misc_feature
<222> (0)...(0)
<223> This sequence is listed from 3' to 5'.

<400> 26
gggaagtgaac agtgctatc gcggccgcaa aaaa 34

<210> 27
<211> 948
<212> DNA
<213> Mus musculus

<400> 27
atgcttcgag gatgggggtg cccagtggtg ggtgtgtgtg tgcgcacagc gctgggggtg 60
ctgtgcctct gctcacagg agctgtggaa gtccaggtct ctgaagaccc cgtgggtggcc 120
ctggtggaca cggatgccac cctacgctgc tctttttccc cagagcctgg cttcagctctg 180
gcacagctca acctcatctg gcagctgaca gacaccaaac agctgggtgca cagcttcacg 240
gagggccggg accaaggcag tgcctactcc aaccgcacag cgctcttccc tgacctgttg 300
gtgcaaggca atgcgtcctt gaggtgtcag cgcgtccgag taaccgacga gggcagctac 360
acctgctttg tgagcattca ggactttgac agcgtgtgtg ttagcctgca ggtggccgcc 420
ccctactcga agcccagcat gaccctggag cccaacaagg acctacgtcc aggggaacatg 480
gtgacctca cgtgctctag ctaccagggc tatccggagg ccgaggtgtt ctggaaggat 540
ggacagggag tgcctttgac tggcaatgtg acatcccaga tggccaacga gcggggcctg 600
ttcgatgttc acagcgtgct gaggggtggtg ctgggtgcta acggcaccta cagctgcctg 660
gtacgcaacc cgggtgttgca gcaagatgct cacggctcag tcaccatcac agggcagccc 720
ctgacattcc cccctgaggc tctgtgggta accgtggggc tctctgtctg tcttgtggta 780

ctactgggtgg ccctggcttt cgtgtgctgg agaaagatca agcagagctg cgaggaggag 840
aatgcagggtg ccaaggacca ggatggagat ggagaaggat ccaagacagc tctacggcct 900
ctgaaaccct ctgaaaacaa agaagatgac ggacaagaaa ttgcttga 948

<210> 28
<211> 315
<212> PRT
<213> Mus musculus

<400> 28
Met Leu Arg Gly Trp Gly Gly Pro Ser Val Gly Val Cys Val Arg Thr
1 5 10 15
Ala Leu Gly Val Leu Cys Leu Cys Leu Thr Gly Ala Val Glu Val Gln
20 25 30
Val Ser Glu Asp Pro Val Val Ala Leu Val Asp Thr Asp Ala Thr Leu
35 40 45
Arg Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn
50 55 60
Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe Thr
65 70 75 80
Glu Gly Arg Asp Gln Gly Ser Ala Tyr Ser Asn Arg Thr Ala Leu Phe
85 90 95
Pro Asp Leu Leu Val Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val
100 105 110
Arg Val Thr Asp Glu Gly Ser Tyr Thr Cys Phe Val Ser Ile Gln Asp
115 120 125
Phe Asp Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys
130 135 140
Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asn Met
145 150 155 160
Val Thr Ile Thr Cys Ser Ser Tyr Gln Gly Tyr Pro Glu Ala Glu Val
165 170 175
Phe Trp Lys Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Ser
180 185 190
Gln Met Ala Asn Glu Arg Gly Leu Phe Asp Val His Ser Val Leu Arg
195 200 205
Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn Pro
210 215 220
Val Leu Gln Gln Asp Ala His Gly Ser Val Thr Ile Thr Gly Gln Pro
225 230 235 240
Leu Thr Phe Pro Pro Glu Ala Leu Trp Val Thr Val Gly Leu Ser Val
245 250 255
Cys Leu Val Val Leu Leu Val Ala Leu Ala Phe Val Cys Trp Arg Lys
260 265 270
Ile Lys Gln Ser Cys Glu Glu Glu Asn Ala Gly Ala Lys Asp Gln Asp
275 280 285
Gly Asp Gly Glu Gly Ser Lys Thr Ala Leu Arg Pro Leu Lys Pro Ser
290 295 300
Glu Asn Lys Glu Asp Asp Gly Gln Glu Ile Ala
305 310 315

<210> 29
<211> 322
<212> PRT
<213> Mus musculus

<400> 29

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Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
 1          5          10          15
Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
 20          25          30
Leu Phe Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
 35          40          45
Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
 50          55          60
Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
 65          70          75          80
Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
 85          90          95
Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
 100         105         110
Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
 115         120         125
Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
 130         135         140
Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
 145         150         155         160
Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
 165         170         175
Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
 180         185         190
Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
 195         200         205
Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
 210         215         220
Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val
 225         230         235         240
Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile
 245         250         255
Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
 260         265         270
Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
 275         280         285
Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro
 290         295         300
His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp
 305         310         315         320
His Ala
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<210> 30

<211> 744

<212> DNA

<213> Mus musculus

<220>

<221> misc_feature

<222> (1)...(744)

<223> mB7-H2

<221> CDS

<222> (1)...(744)

<400> 30

atg	ctg	ctc	ctg	ctg	ccg	ata	ctg	aac	ctg	agc	tta	caa	ctt	cat	cct	48
Met	Leu	Leu	Leu	Leu	Pro	Ile	Leu	Asn	Leu	Ser	Leu	Gln	Leu	His	Pro	
1				5					10					15		
gta	gca	gct	tta	ttc	acc	gtg	aca	gcc	cct	aaa	gaa	gtg	tac	acc	gta	96
Val	Ala	Ala	Leu	Phe	Thr	Val	Thr	Ala	Pro	Lys	Glu	Val	Tyr	Thr	Val	
			20					25					30			
gac	gtc	ggc	agc	agt	gtg	agc	ctg	gag	tgc	gat	ttt	gac	cgc	aga	gaa	144
Asp	Val	Gly	Ser	Ser	Val	Ser	Leu	Glu	Cys	Asp	Phe	Asp	Arg	Arg	Glu	
		35					40					45				
tgc	act	gaa	ctg	gaa	ggg	ata	aga	gcc	agt	ttg	cag	aag	gta	gaa	aat	192
Cys	Thr	Glu	Leu	Glu	Gly	Ile	Arg	Ala	Ser	Leu	Gln	Lys	Val	Glu	Asn	
	50					55					60					
gat	acg	tct	ctg	caa	agt	gaa	aga	gcc	acc	ctg	ctg	gag	gag	cag	ctg	240
Asp	Thr	Ser	Leu	Gln	Ser	Glu	Arg	Ala	Thr	Leu	Leu	Glu	Glu	Gln	Leu	
65					70				75						80	
ccc	ctg	gga	aag	gct	ttg	ttc	cac	atc	cct	agt	gtc	caa	gtg	aga	gat	288
Pro	Leu	Gly	Lys	Ala	Leu	Phe	His	Ile	Pro	Ser	Val	Gln	Val	Arg	Asp	
				85					90					95		
tcc	ggg	cag	tac	cgt	tgc	ctg	gtc	atc	tgc	ggg	gcc	gcc	tgg	gac	tac	336
Ser	Gly	Gln	Tyr	Arg	Cys	Leu	Val	Ile	Cys	Gly	Ala	Ala	Trp	Asp	Tyr	
			100					105					110			
aag	tac	ctg	acg	gtg	aaa	gtc	aaa	gct	tct	tac	atg	agg	ata	gac	act	384
Lys	Tyr	Leu	Thr	Val	Lys	Val	Lys	Ala	Ser	Tyr	Met	Arg	Ile	Asp	Thr	
		115					120				125					
agg	atc	ctg	gag	gtt	cca	ggt	aca	ggg	gag	gtg	cag	ctt	acc	tgc	cag	432
Arg	Ile	Leu	Glu	Val	Pro	Gly	Thr	Gly	Glu	Val	Gln	Leu	Thr	Cys	Gln	
	130					135					140					
gct	aga	ggt	tat	ccc	cta	gca	gaa	gtg	tcc	tgg	caa	aat	gtc	agt	gtt	480
Ala	Arg	Gly	Tyr	Pro	Leu	Ala	Glu	Val	Ser	Trp	Gln	Asn	Val	Ser	Val	
145					150				155						160	
cct	gcc	aac	acc	agc	cac	atc	agg	acc	ccc	gaa	ggc	ctc	tac	cag	gtc	528
Pro	Ala	Asn	Thr	Ser	His	Ile	Arg	Thr	Pro	Glu	Gly	Leu	Tyr	Gln	Val	
			165					170						175		
acc	agt	gtt	ctg	cgc	ctc	aag	cct	cag	cct	agc	aga	aac	ttc	agc	tgc	576
Thr	Ser	Val	Leu	Arg	Leu	Lys	Pro	Gln	Pro	Ser	Arg	Asn	Phe	Ser	Cys	
			180					185					190			
atg	ttc	tgg	aat	gct	cac	atg	aag	gag	ctg	act	tca	gcc	atc	att	gac	624
Met	Phe	Trp	Asn	Ala	His	Met	Lys	Glu	Leu	Thr	Ser	Ala	Ile	Ile	Asp	
	195					200					205					
cct	ctg	agt	cgg	atg	gaa	ccc	aaa	gtc	ccc	aga	acg	tgg	cca	ctt	cat	672
Pro	Leu	Ser	Arg	Met	Glu	Pro	Lys	Val	Pro	Arg	Thr	Trp	Pro	Leu	His	
	210					215					220					

gtt ttc atc ccg gcc tgc acc atc gct ttg atc ttc ctg gcc ata gtg 720
 Val Phe Ile Pro Ala Cys Thr Ile Ala Leu Ile Phe Leu Ala Ile Val
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 Asp Val Gly Ser Ser Val Ser Leu Glu Cys Asp Phe Asp Arg Arg Glu
 35 40 45
 Cys Thr Glu Leu Glu Gly Ile Arg Ala Ser Leu Gln Lys Val Glu Asn
 50 55 60
 Asp Thr Ser Leu Gln Ser Glu Arg Ala Thr Leu Leu Glu Glu Gln Leu
 65 70 75 80
 Pro Leu Gly Lys Ala Leu Phe His Ile Pro Ser Val Gln Val Arg Asp
 85 90 95
 Ser Gly Gln Tyr Arg Cys Leu Val Ile Cys Gly Ala Ala Trp Asp Tyr
 100 105 110
 Lys Tyr Leu Thr Val Lys Val Lys Ala Ser Tyr Met Arg Ile Asp Thr
 115 120 125
 Arg Ile Leu Glu Val Pro Gly Thr Gly Glu Val Gln Leu Thr Cys Gln
 130 135 140
 Ala Arg Gly Tyr Pro Leu Ala Glu Val Ser Trp Gln Asn Val Ser Val
 145 150 155 160
 Pro Ala Asn Thr Ser His Ile Arg Thr Pro Glu Gly Leu Tyr Gln Val
 165 170 175
 Thr Ser Val Leu Arg Leu Lys Pro Gln Pro Ser Arg Asn Phe Ser Cys
 180 185 190
 Met Phe Trp Asn Ala His Met Lys Glu Leu Thr Ser Ala Ile Ile Asp
 195 200 205
 Pro Leu Ser Arg Met Glu Pro Lys Val Pro Arg Thr Trp Pro Leu His
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 Ile Ile Gln Arg Lys Arg Ile
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Gly	Ser	Asn	Val	Thr	Met	Glu
		35				40
Asp	Leu	Leu	Ala	Leu	Val	Val
		50				55
Ile	Gln	Phe	Val	Ala	Gly	Glu
		65				70
Phe	Arg	Gly	Arg	Ala	Ser	Leu
		85				90
Ala	Ala	Leu	Gln	Ile	Thr	Asp
		100				105
Cys	Cys	Ile	Ile	Ser	Tyr	Gly
		115				120
Lys	Val	Asn	Ala	Pro	Tyr	Arg
		130				135
Pro	Ala	Thr	Ser	Glu	His	Glu
		145				150
Glu	Ala	Glu	Val	Ile	Trp	Thr
		165				170
Lys	Arg	Ser	Val	Thr	Thr	Ser
		180				185
Thr	Ser	Ser	Leu	Arg	Val	Asn
		195				200
Thr	Phe	Trp	Arg	Ser	Gln	Pro
		210				215
Ile	Pro	Glu	Leu	Pro	Ala	Thr
		225				230
Val	Leu	Leu	Gly	Ser	Ile	Leu
		245				250
Leu	Leu	Phe	Leu	Arg	Lys	Gln
		260				265
Gly	Val	Glu	Asp	Thr	Ser	Ser
		275				280
Glu	Thr					
		290				